

Exercise 1

A slight modification of Tomy Cherian's solution.

Fahrenheit to Celsius

Code of F2C:

```
type F2C
```

```
function C = F2C(F)
%Convert temperature in Farenheit to temperature in Celcius
%
% Call: C=F2C(F)
% Input: scalar/vector F
% Output: scalar/vector C
% Example: C=F2C(-40:40);

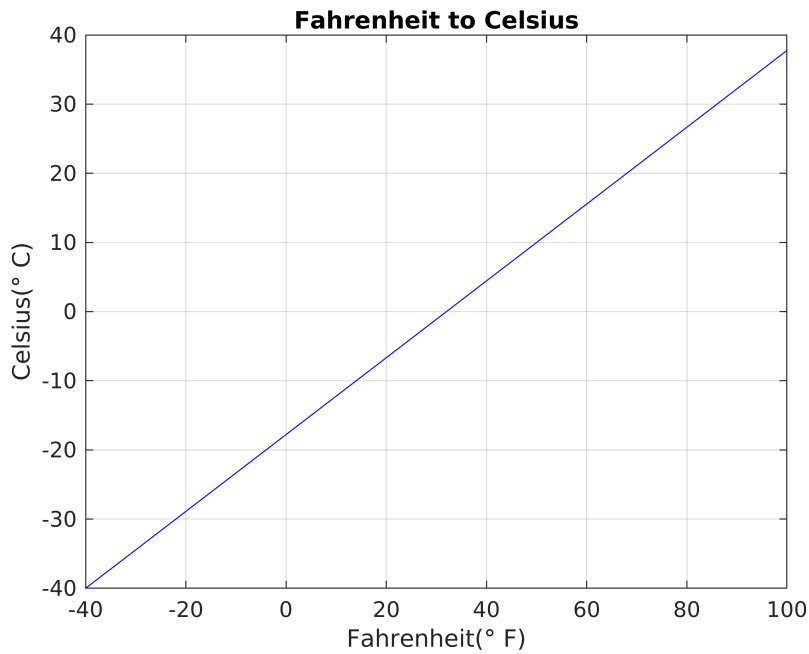
C=(F-32).*5/9;
end
```

```
F=-40:100; % Fahrenheit degrees from -40 to 40;
C=F2C(F);
T1=[F',C']; % This is enough.
% Look at first 10 rows:
T1(1:10,:)
```

```
ans = 10x2
-40.0000 -40.0000
-39.0000 -39.4444
-38.0000 -38.8889
-37.0000 -38.3333
-36.0000 -37.7778
-35.0000 -37.2222
-34.0000 -36.6667
-33.0000 -36.1111
-32.0000 -35.5556
-31.0000 -35.0000
```

Using table (elegant, not required):

```
T1table=array2table(T1, 'VariableNames', {'Fahrenheit', 'Celsius'});
plot(F,C, 'b');
grid on;
xlabel('Fahrenheit(\circ F)');
ylabel('Celsius(\circ C)');
title('Fahrenheit to Celsius');
```



```
shg;
```

Celsius to Fahrenheit

```
%Celsius to Fahrenheit
% Code of C2F
type C2F % need (%%)after,otherwise not shown(for some reason)
```

```
function F = C2F(C)
%Convert temperature in Celcius to temperature in Farenheit
%
% Call: F=C2F(C)
% Input: scalar/vector C
% Output: scalar/vector F
% Example: F=C2F(-40:40);

F=9/5*C+32;
end
```

```
C=-40:100;% Celsius degrees from -40 to 40;
F=C2F(C);
T2=[C',F'];
```

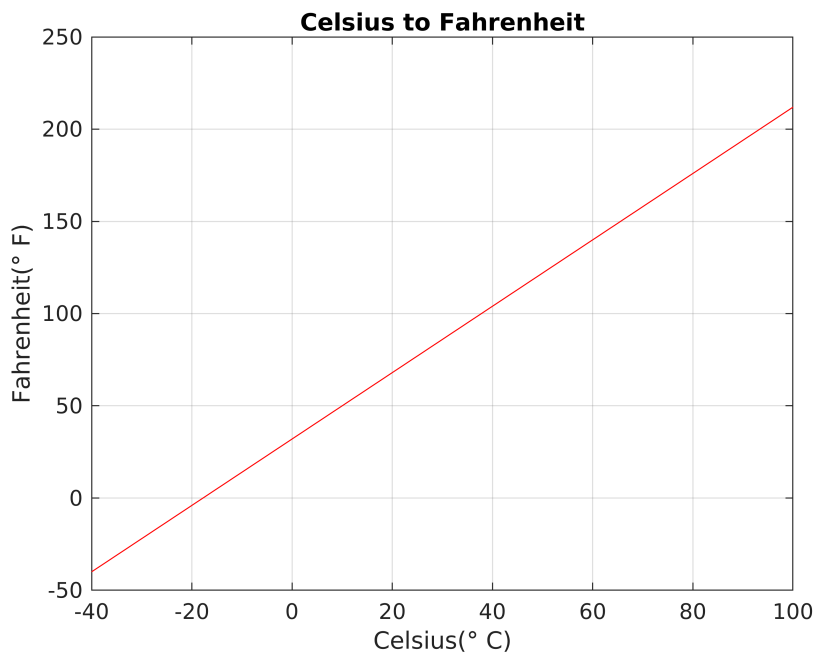
Table: Elegant (not required), like above

```
T2table=array2table(T2,'VariableNames',{'Fahrenheit','Celsius'});
T2table(1:10,:)
```

```
ans = 10x2 table
```

	Fahrenheit	Celsius
1	-40	-40.0000
2	-39	-38.2000
3	-38	-36.4000
4	-37	-34.6000
5	-36	-32.8000
6	-35	-31.0000
7	-34	-29.2000
8	-33	-27.4000
9	-32	-25.6000
10	-31	-23.8000

```
figure
plot(C,F,'r');
grid on;
xlabel('Celsius(\circ C)')
ylabel('Fahrenheit(\circ F)');
title('Celsius to Fahrenheit');
```



```
shg;
```